

# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Addiese: COMMISSIONER FOR PATENTS P O Box 1450 Alexandra, Virginia 22313-1450 www.wepto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,646	12/29/2003	Jasvantrai Shah	RIC99067	5723
25537 VERIZON	7590 11/12/201	0	EXAMINER	
PATENT MANAGEMENT GROUP 1320 North Court House Road 9th Floor			WOLDEKIDAN, HIBRET ASNAKE	
			ART UNIT	PAPER NUMBER
ARLINGTON, VA 22201-2909			2613	
			NOTIFICATION DATE	DELIVERY MODE
			11/12/2010	ELECTRONIC

# Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patents@verizon.com

## Application No. Applicant(s) 10/747.646 SHAH, JASVANTRAI Office Action Summary Examiner Art Unit Hibret A. Woldekidan 2613 -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --Period for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS. WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b). Status 1) Responsive to communication(s) filed on <u>08/27/2010</u>. 2a) ☐ This action is FINAL. 2b) This action is non-final. 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) Claim(s) 1-20 is/are pending in the application. 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration. 5) Claim(s) \_\_\_\_\_ is/are allowed. 6) Claim(s) 1-20 is/are rejected. 7) Claim(s) \_\_\_\_\_ is/are objected to. 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement. Application Papers 9) The specification is objected to by the Examiner. 10) ☐ The drawing(s) filed on 29 December 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abevance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152. Priority under 35 U.S.C. § 119 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some \* c) None of: Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). \* See the attached detailed Office action for a list of the certified copies not received. Attachment(s)

1) Notice of References Cited (PTO-892)

Notice of Draftsperson's Patent Drawing Review (PTO-948)

Imformation Disclosure Statement(s) (PTC/G5/08)
Paper No(s)/Mail Date \_\_\_\_\_\_.

Interview Summary (PTO-413)
Paper No(s)/Mail Date.

6) Other:

Notice of Informal Patent Application

Art Unit: 2613

#### DETAILED ACTION

#### Response to Arguments

 Examiner acknowledges receipt of Applicant's Amendments, remarks, arguments received on 08/27/2010. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

However, after further examination, the primary reference Erikson teaches a structure of a router(1502 of fig. 17b) and an OXC(1504 of fig. 17b). The router(1502) having a protection port(1522) and a working port(1521A), and the OXC having a protection port(1332) and a working port(1541B. Upon detecting of a failure in the router, the router sends a signal to the OXC(1504) indicating a failure, as a result, a working port(1540B) of the OXC(1504) connects to the protection port(1522) of the router(1522)(See Col. 23 lines 28-41, fig. 17b).

Walter, the secondary reference, teaches transmitting high priority data using a first path(5310 of fig. 53, solid line) and a secondary path transmitting a low priority data( shown by path 5312, dashed line) during normal operation. when a failure occurs affecting the high priority data path, the low priority data path preempted and the high priority data rerouted over the low priority data path(See Paragraph 508,487, fig. 53). Hence the new grounds of rejection is presented still using the prior art in the previous rejection

Page 3

Application/Control Number: 10/747,646

Art Unit: 2613

### Claim Rejections - 35 USC § 103

 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

 Claim 1-10 and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson et al. (6.882.765) in view of Walters (US 2002/0176131).

Considering claim 1, Erickson discloses a method comprising: providing, in an optical network, an optical cross-connect system (OXC) having a working port and a spare port(See Col. 23 lines 33-41, fig. 17b i.e. providing an OXC(1504) having a working port(1541B) and a protection port(1332). Further as discussed in Col. 13 lines 10-21, an optical cross-connect(OXC) deployed in a telecommunication network which communicates with other network equipments(routers) via optical transmission links(1506). This shows that the OXC is provided in an optical network)); providing a router having a working port to transmit or receive data to or from the working port of the OXC and a protection port to transmit or receive data to or from the spare port of the OXC(See Col. 20 lines 22-26, Col. 23 lines 33-41, fig. 17b i.e. the a router(1502) having a working port (1521a) and a protection port(1522) to bidirectionally receive and transmit optical signals from the OXC(1504)); detecting a failure in the router(See Col. 22 lines 64-67, fig. 17b i.e. detecting a failure in the router(1502) by a port 1521A); sending a signal from the

Art Unit: 2613

router to the OXC(See Col. 23 lines 1-8, fig. 17b i.e. after the router(1502) detects a failure in one of the links(1702), the router(1502) sends a signal to the OXC)), where the signal indicates the failure(See Col. 23 lines 1-8 and lines 28-41, fig. 17b i.e. sending failure indicating signal from the router(1502) to the oxc(1504)); causing the working port of the OXC to connect to the protection port of the router in response to detection of the signal(See Col. 23 lines 28-41, fig. 17b i.e. fig. 17 b illustrates that after the router(1502) detects a failure in one of the links(1702), the router(1502) sends a signal to the OXC(1504), as a result, a working port(1540B) of the OXC(1504) to connect to the protection port(1522) of the router(1522)) and transmitting data from the router to the OXC via the protection port(See Col. 23 lines 34-41, fig. 17b i.e. fig. 17 the OXC working port(1541B) connects to the router protection port(1522) to transmit signal via the protection port).

Ericson discloses a router(1502) having a protection port(1522) and a working port(1521A) (See Col. 20 lines 22-26, Col. 23 lines 33-41, fig. 17b i.e. the a router(1502) having a working port (1521<sub>A</sub>) and a protection port(1522) to bidirectionally receive and transmit optical signals from the OXC(1504)), and OXC having a protection port(1332) and a working port(1541B)(See Col. 23 lines 33-41, fig. 17b i.e. providing an OXC(1504) having a working port(1541B) and a protection port(1332)). UPON detecting of a failure in the router, transmitting data using a protection port(See Col. 23 lines 28-41, fig. 17b i.e. fig. 17 b Upon router detects a failure in one of the links(1702), the router(1502) sends a signal to the OXC(1504),

Art Unit: 2613

as a result, a working port(1540B) of the OXC(1504) connects to the protection port(1522) of the router(1522)).

Erickson does not explicitly disclose a working port to transmit or receive high priority data and a protection port to transmit or receive low priority data where the transmission of low priority data is preempted by the transmission of the high priority data, in response to the failure; and transmitting high priority data via a protection port.

Walters teaches a working port to transmit or receive high priority data (See Paragraph 508, fig. 53 i.e. during normal operation, transmitting a high priority data using path(5310, shown by a solid line). The first path) and a protection port to transmit or receive low priority data (See Paragraph 508, fig. 53 i.e. during normal operation, transmitting low priority data using path(5312, shown by a dashed line)) where the transmission of low priority data is preempted by the transmission of the high priority data, in response to the failure(See Paragraph 487,508, fig. 53 i.e. when a failure occurs affecting the high priority data path, the low priority data path preempted and rerouting the high priority data over the low priority data path); and transmitting high priority data via a protection port(See Paragraph 487,508, fig. 53 i.e. transmitting high priority data using the low priority data path).

It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Erickson, and have a working port to transmit or receive high priority data and a protection port to transmit or receive low priority data where the transmission of low priority data to be preempted by the transmission of the high priority data, in response to the failure; and transmitting high priority data via a protection port.

Art Unit: 2613

as taught by Walters, thus providing an efficient data transmission system by utilizing the usage of bandwidth by using protection path to carry pre-emptable traffic so that incase of a failure high priority data can be transmitted using the preemtable protection path, as discussed by Walters(Paragraph 6).

Considering claim 2 Erickson discloses the method of claim 1, where the sending further comprises: sending the signal as an in-band signal, to the OXC (See abstract, Col. 25 lines 53-57(claim 14), Col. 23 lines 2-5, Col. 25 lines 44-47 i.e. sending failure signaling channel from the router to the OXC(See Col. 23 lines 2-5) to inform connection failure and this signaling channel is an in-band signaling channel (See Col. 25 lines 44-47)).

Considering claim 3 Erickson discloses the method of claim 2, where the sending an in-band signal to the OXC further comprises: sending a Synchronous Optical Network (SONET) signal to the OXC (See abstract, Col. 20 lines 5-10 i.e. Communicating SONET channels with the OXC).

Considering claim 4 Erickson discloses, the method of claim 1, where the sending further comprises: sending the signal as an out-of-band signal to the OXC (See abstract, Col. 25 lines 22-24(claim 8), Col. 23 lines 2-5, Col. 25 lines 44-47 i.e. An out of band channel or an in band channel can be used to indicate connection failure(See abstract). Erickson further discussed, sending a failure signaling channel from the router to the OXC(See Col. 23 lines 2-5) to inform connection failure and this signaling channel can be an out-of-band signaling channel(See

Art Unit: 2613

Col. 25 22-24(claim 8), Col. 28 lines 27-31). The out-of-band signaling channel is a dedicated signaling link (See Col. 19 lines 13-18))).

Considering claim 5 Erickson discloses, the method of claim 4, where the sending an out-of-band signal comprises: the step of addressing the out-of-band signal to an Internet Protocol address associated with the OXC (See Col. 19 lines 1-9 i.e. internet protocol associated with OXC).

Considering claim 6 Erickson discloses a method comprising: providing, in an optical network, an optical cross-connect system (OXC) having a working port and a spare port(See Col. 23 lines 33-41, fig. 17b i.e. providing an OXC(1504) having a working port(1541B) and a protection port(1332). Further as discussed in Col. 13 lines 10-21, an optical cross-connect(OXC) deployed in a telecommunication network which communicates with other network equipments(routers) via optical transmission links(1506). This shows that the OXC is provided in an optical network)); providing a router having a working port to transmit or receive data to or from the working port of the OXC and a protection port to transmit or receive data to or from the spare port of the OXC(See Col. 23 lines 33-41, fig. 17b i.e. a router(1502) having a working port (1521<sub>A-N</sub>) and a protection port(1522) to receive and transmit optical signals from the OXC(1504)); receiving a signal at the OXC from the router, the signal indicating a failure of a working port in the router(See Col. 23 lines 1-5 and lines 28-30, fig. 17b i.e. the OXC(1504) receiving an error indicative signal from the router(1502) after the router(1502) detects a failure in one of the working paths(1506A'-N')); connecting the protection port of the router to the working port of the

Art Unit: 2613

OXC in response to receiving the signal (See Col. 23 lines 1-5 and lines 28-41, fig. 17b i.e. after the router(1502) detects a failure in one of the links(1702), the router(1502) sends a signal to the oxc(1504). In response, the OXC working port(1541B) connects to the router(1502) protection port(1522)).

Ericson discloses a router(1502) having a protection port(1522) and a working port(1521A) (See Col. 20 lines 22-26, Col. 23 lines 33-41, fig. 17b i.e. the a router(1502) having a working port (1521<sub>A</sub>) and a protection port(1522) to bidirectionally receive and transmit optical signals from the OXC(1504)), and OXC having a protection port(1332) and a working port(1541B)(See Col. 23 lines 33-41, fig. 17b i.e. providing an OXC(1504) having a working port(1541B) and a protection port(1332)). UPON detecting of a failure in the router, transmitting data using a protection port(See Col. 23 lines 28-41, fig. 17b i.e. fig. 17 b Upon router detects a failure in one of the links(1702), the router(1502) sends a signal to the OXC(1504), as a result, a working port(1540B) of the OXC(1504) connects to the protection port(1522) of the router(1522)).

Erickson does not explicitly disclose a working port to transmit or receive high priority data and a protection port to transmit or receive low priority data where the transmission of low priority data is preempted by the transmission of the high priority data, in response to the failure; and transmitting high priority data via a protection port.

Walters teaches a working port to transmit or receive high priority data (See Paragraph 508, fig. 53 i.e. transmitting a high priority data using path(5310, shown by a solid line)) and a protection port to transmit or receive low priority data (See

Art Unit: 2613

Paragraph 508, fig. 53 i.e. transmitting low priority data using path(5312, shown by a dashed line)) where the transmission of low priority data is preempted by the transmission of the high priority data, in response to the failure(See Paragraph 487,508, fig. 53 i.e. when a failure occurs affecting the high priority data path, the low priority data path preempted and rerouting the high priority data over the low priority data path); and transmitting high priority data via a protection port(See Paragraph 487,508, fig. 53 i.e. transmitting high priority data using the low priority data path).

It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Erickson, and have a working port to transmit or receive high priority data and a protection port to transmit or receive low priority data where the transmission of low priority data to be preempted by the transmission of the high priority data, in response to the failure; and transmitting high priority data via a protection port, as taught by Walters, thus providing an efficient data transmission system by utilizing the usage of bandwidth by using protection path to carry pre-emptable traffic so that incase of a failure high priority data can be transmitted using the preemtable protection path, as discussed by Walters(Paragraph 6).

Considering claim 7 Erickson discloses the method of claim 6, where the receiving further comprises: receiving an in-band signal, from the protection port of the router, at the OXC (See abstract, Col. 25 lines 53-57(claim 14), Col. 23 lines 2-5, Col. 25 lines 44-47 i.e. receiving failure signaling channel from the router to the OXC(See Col. 23 lines 2-5) and this signaling channel is an in-band signaling

Art Unit: 2613

channel(See Col. 25 lines 44-47). The in-band signaling channel is a dedicated signaling link used in parallel with each of the working link(See Col. 25 lines 53-57(claim 14)). This shows that the signaling channel is transmitted not using a working channel but using a spare channel. Erickson further discusses providing signaling interface using a protection or a spare path(See Col. 18 lines 29-31)).

Considering claim 8 Erickson discloses the method of claim 7, where the receiving an in-band signal at the OXC comprises: receiving a Synchronous Optical Network (SONET) signal at the OXC (See abstract, Col. 20 lines 5-10 i.e. Communicating SONET channels with the OXC).

Considering claim 9 Erickson discloses the method of claim 6, where the receiving further comprises: receiving an out-of-band signal at the OXC (See abstract, Col. 25 lines 22-24(claim 8), Col. 23 lines 2-5, Col. 25 lines 44-47 i.e. An out of band channel or an in band channel can be used to indicate connection failure(See abstract). Erickson further discussed, receiving a failure signaling channel from the router to the OXC(See Col. 23 lines 2-5) to inform connection failure and this signaling channel can be an out-of-band signaling channel (See Col. 25 22-24(claim 8), Col. 28 lines 27-31). The out-of-band signaling channel is a dedicated signaling link (See Col. 19 lines 13-18))).

Considering claim 10 Erickson discloses, the method of claim 9, where the receiving an out-of-band signal further comprises: addressing the out-of-band signal to an Internet Protocol address associated with the OXC (See Col. 19 line 1-9 i.e. internet protocol associated with OXC).

Art Unit: 2613

Considering claim 15, Erickson discloses a communications network for transmitting data, the communication network comprising: an optical cross-connect system (OXC) having a working port and a spare port, the OXC being located in an optical network(See Col. 23 lines 33-41, fig. 17b i.e. providing an OXC(1504) having a working port(1541B) and a protection port(1332). Further as discussed in Col. 13 lines 10-21, an optical cross-connect(OXC) deployed in a telecommunication network which communicates with other network equipments(routers) via optical transmission links(1506). This shows that the OXC is located in an optical network)); and a router for receiving the data from a terminal(See Col 19 lines 1-7 i.e. a router which is a client node(1502) for receiving data from other units), the router comprising:

a working port to transmit or receive data to or from the working port of the OXC(See Col. 20 lines 22-26, fig. 17B i.e. the router(1502) has a working port(1521A) to transmit data bidirectionally to/from the OXC(1504)); and a protection port (See Col. 23 lines 34-36, fig. 17B i.e. the router(1502) has a protection port(1522) to bidirectionally communicate with protection port of the OXC(1504)), where upon detection of a failure of the working port of the router, the input protection port of the router connects to the working port of the OXC (Col. 23 lines 28-41, Col. 22 lines 57-60,fig. 17b i.e. upon detecting of failure in the working port of a router(1531A), the router(1502) internally switches from its working port(1521) to its protection port(1532) to transmit signal to the working port(1541B) of the OXC(1504)).

Art Unit: 2613

Ericson discloses a router(1502) having a protection port(1522) and a working port(1521A) (See Col. 20 lines 22-26, Col. 23 lines 33-41, fig. 17b i.e. the a router(1502) having a working port (1521<sub>A</sub>) and a protection port(1522) to bidirectionally receive and transmit optical signals from the OXC(1504)), and OXC having a protection port(1332) and a working port(1541B)(See Col. 23 lines 33-41, fig. 17b i.e. providing an OXC(1504) having a working port(1541B) and a protection port(1332)). UPON detecting of a failure in the router, transmitting data using a protection port(See Col. 23 lines 28-41, fig. 17b i.e. fig. 17 b Upon router detects a failure in one of the links(1702), the router(1502) sends a signal to the OXC(1504), as a result, a working port(1540B) of the OXC(1504) connects to the protection port(1522) of the router(1522)).

Erickson does not explicitly disclose a working port to transmit or receive high priority data and a protection port to transmit or receive low priority data where the transmission of low priority data is preempted by the transmission of the high priority data, in response to the failure; and transmitting high priority data via a protection port.

Walters teaches a working port to transmit or receive high priority data (See Paragraph 508, fig. 53 i.e. transmitting a high priority data using path(5310, shown by a solid line)) and a protection port to transmit or receive low priority data (See Paragraph 508, fig. 53 i.e. transmitting low priority data using path(5312, shown by a dashed line)) where the transmission of low priority data is preempted by the transmission of the high priority data, in response to the failure(See Paragraph 487,508, fig. 53 i.e. when a failure occurs affecting the high priority data path, the

Art Unit: 2613

low priority data path preempted and rerouting the high priority data over the low priority data path); and transmitting high priority data via a protection port(See Paragraph 487,508, fig. 53 i.e. transmitting high priority data using the low priority data path).

It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Erickson, and have a working port to transmit or receive high priority data and a protection port to transmit or receive low priority data where the transmission of low priority data to be preempted by the transmission of the high priority data, in response to the failure; and transmitting high priority data via a protection port, as taught by Walters, thus providing an efficient data transmission system by utilizing the usage of bandwidth by using protection path to carry pre-emptable traffic so that incase of a failure high priority data can be transmitted using the preemtable protection path, as discussed by Walters(Paragraph 6).

Considering Claim 16 Erickson discloses the communications network of claim 15, where the router transmits a signal indicating the failure to the OXC, the signal causing the OXC to connect the input protection port to the input working port of the OXC (See Col. 23 line 6-27, fig. 15 i.e. router transmit signal incase of a failure).

Considering claim 17 Erickson disclose, the communications network of claim 16, where the signal is an in-band signal (See abstract i.e. in-band signal)

Considering claim 18 Erickson disclose, the communications network of claim 17, where the in-band signal is a Synchronous Optical Network (SONET) signal (See Col. 20 lines 5-10 i.e. SONET channels)

Art Unit: 2613

Considering claim 19 Erickson discloses the communications network of claim 16, where the signal is an out-of-band signal (See Abstract, Col. 2 lines 63-67 and Col. 3 lines 1-3, Col. 16 i.e. an out-of-band signal).

Considering claim 20 Erickson discloses, the communications network of claim 19, where the out-of-band signal is addressed to an Internet Protocol address associated with the OXC (See Col. 19 lines 1-9 i.e. internet protocol associated with OXC).

 Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu et al (US 2002/0063916) in view of Walters(US 2002/0176131).

Considering Claim 11 Chiu discloses an optical cross-connect system, located in an optical network, the optical cross-connect system (See Paragraph 45, fig. 3 i.e. an optical cross connect system(OXC<sub>B</sub>) located in a network) comprising: a spare port to transmit data to or from a router that is external to the optical cross-connect system(See Paragraph 45,47 fig. 3 i.e. the optical cross connect (OXC<sub>B</sub>) inherently has a port to communicate with a backup router(100<sub>B2</sub>) which is external to OXC<sub>B</sub>); and a working port to transmit data to or from a primary router that is external to the optical cross-connect system(See Paragraph 45, fig. 3 i.e. the optical cross connect (OXC<sub>B</sub>) inherently has a working port in order to communicate with a working router(100<sub>B1</sub>) which is external to OXC<sub>B</sub>), where the working port is connected to the router in response to a failure of the primary router(See Paragraph 45,48, fig. 3,6 i.e. UP on the OXC(OXC<sub>B</sub>) detects the failure of the primary router(100<sub>B1</sub>) the (OXC<sub>B</sub>) setup a new connection to the backup router(100<sub>B2</sub>)),

Art Unit: 2613

Chiu discloses upon detecting a failure in the primary/working router( $(100_{B1})$ ), the OXC(OXC<sub>B</sub>) establishing a light path with a backup router( $(100_{B1})$ )(See )

Walters teaches the transmission of low priority data to or from the router is preempted by the transmission of the high priority data to or from the router, in response to the failure (See Paragraph 508,487, fig. 53 i.e. transmitting a high priority data using path(5310, shown by a solid line) and transmitting low priority data using path(5312, shown by a dashed line). when a failure occurs affecting the high priority data path, the low priority data path preempted and rerouting the high priority data over the low priority data path).

It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Chiu, and have the transmission of low priority data to be preempted by the transmission of the high priority data, in response to the failure, as taught by Walters, thus providing an efficient data transmission system by utilizing the usage of bandwidth by using protection path to carry pre-emptable traffic so that incase of a failure high priority data can be transmitted using the preemtable protection path, as discussed by Walters(Paragraph 6).

 Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu et al (US 2002/0063916) in view of Walters(US 2002/0176131) further in view of Erickson et al (6.882.765).

Considering claim 12, Chiu and Walters do not explicitly disclose the optical cross-connection system of claim 11, where the working port is connected to the router in response to receiving an inband signal from the router.

Art Unit: 2613

Erickson teaches the working port is connected to the router in response to receiving an in-band signal from the router(See abstract, Col. 23 line 17-27, fig. 17B i.e. in-band signaling between the working port of the OXC and router).

It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Chiu and Walters, and have the OXC working port to be connected to the router in response to receiving an in-band signal from the router, as taught by Erickson, thus allowing a means of minimizing the time to customer service interruption during switching from the failed port to the protection port by having both ports in the same unit, as discussed by Erickson (Col. 2 line 63-Col. 3 line 1).

Considering claim 13, Chiu and Walters do not specifically disclose the optical cross connection system of claim 12, where the working port is connected to the router in response to receiving a Synchronous Optical Network (SONET) signal from the router

Erickson teaches the optical cross connection system of claim 12, where the working port is connected to the router in response to receiving a Synchronous Optical Network (SONET) signal from the router (See Col. 19 lines 1-7, Col. 23 line 6-27, fig. 15 i.e. working port is connected to a router in case of a failure in primary path).

It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Chiu and Walters, and the OXC working port to be connected to the router in response to receiving a Synchronous Optical Network (SONET) signal from the router for the same reason as discussed in claim 12

Art Unit: 2613

Considering claim 14, Chiu and Walters do not specifically disclose the optical cross-connection system of claim 11, where the working port is connected to the router in response to receiving an out-of-band signal from the router.

Erickson teaches the optical cross-connection system of claim 11, where the working port is connected to the router in response to receiving an out-of-band signal from the router (See Col. 2 lines 63-67 and Col. 3 lines 1-3, Col. 16 lines 28-46 i.e. working port is connected to a router in response to an out of bound signal).

It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Chiu and Walters, and the working port is connected to the router in response to receiving an out-of-band signal from the router for the same reason as discussed in claim 12.

### Conclusions

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hibret A. Woldekidan whose telephone number is (571)270-5145. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on 5712723078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 10/747,646 Page 18

Art Unit: 2613

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. A. W./ Examiner, Art Unit 2613

/Kenneth N Vanderpuye/ Supervisory Patent Examiner, Art Unit 2613 Application/Control Number: 10/747,646 Page 19

Art Unit: 2613

Application/Control Number: 10/747,646 Page 20

Art Unit: 2613